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THE UNIVERSITY OF ALBERTA

AN ANALYSIS OF TOURIST TRAVEL
TO THE PROVINCE OF ALBERTA

by

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A THESIS

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled An Analysis of Tourist Travel to the Province of Alberta submitted by Jeremy James Peers in partial fulfilment of the requirements for the degree of Master of Business Administration.

ABSTRACT

Although the tourist industry has made attempts at measuring and predicting tourist flows, and although large sums of money have been spent on tourist promotion, in the past these two programs have not been co-ordinated to the point where meaningful analysis of tourist flows leads to effective allocation of promotion resources. This study derives a model for the analysis of the volume of tourist travel to a region, and for illustration, applies the model to the Province of Alberta. The model is based on a comparison between actual tourist flows and a standard--the quantification of the tourist region's potential to attract tourists. The model reveals sectors of the market which are relatively weak or strong in sending tourists to the tourist region. This process pinpoints areas requiring special attention, and, if used over a period of several years, could provide valuable follow-up information on the success of promotion programs. The model can be easily adapted for other uses including the prediction of future tourist flows.

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I. INTRODUCTION

The Purpose of the Study

The purpose of this study is to develop a model which will permit analysis of the volume of tourist travel¹ to the Province of Alberta. The application of the model reveals the degree of Alberta's success in the tourist industry relative to other tourist regions and relative to the Province's potential. In addition, the model pinpoints those sectors of the tourist market in which the Province shows relative strength or weakness. Although not illustrated in detail in the study, the model has several other uses. If applied to a particular region over several time periods, the model will show changes in the region's success in attracting tourists, thereby aiding in the evaluation of past promotional programs and providing guidance for those of the future. The model can also be easily adapted for the prediction of future tourist flows to any given region.

The model achieves the above mentioned goals through the comparison of actual tourist flows with a standard. The standard used in the model is the potential tourist flow to

the tourist region, in this instance Alberta.

A region's potential to attract tourists is equivalent in concept to the sales potential² of one company's products within an industry. Rather than being a forecast, the potential represents a currently attainable goal, one that can be reached with efficient allocation of available resources. Determining what is a currently attainable level of tourist attraction, however, requires extensive information regarding prior tourist flows and the effects on these flows of various alternative allocations of promotion resources. Since these data are not available, we must make an estimate of the potential tourist flow to Alberta for this first application of the model. Although this procedure will hamper the evaluation of the level of actual tourist flow relative to the potential flow, it will not unduly affect the other functions of the model.

By estimating Alberta's potential tourist flow and comparing it to the actual flow, we will in essence be testing the null hypothesis that the Province has an average degree of ability to attract tourists. An average degree of ability to attract tourists implies that the Province receives the same number of North American tourists as it would under the following hypothetical conditions: the volume of tourist travel and the distances travelled by

tourists remain the same as at present, but the directions in which they travel, and thus their ultimate destinations, were chosen at random. If a significant variance appears when comparing the potential flow (arrived at through the estimate) to the actual flow, the null hypothesis that Alberta has average attraction power would have to be rejected and the potential would be adjusted in future applications of the model. The direction and extent of the variance fulfills one of the purposes of the model by indicating the relative strength of Alberta's tourist attraction power in the North American tourist industry.

The other stated purpose of the model is to pinpoint the sectors of the North American tourist market in which the Province shows relative strength or weakness. This is achieved through dividing the total market into sixty-three sub-markets and by comparing the potential flow from each region with the actual tourist flow.

The Significance of the Study

Tourism has become one of the most important industries in North America. The fact that tourism can bring with it prosperity without depleting natural resources and that its benefits can become so widely spread throughout a region, are major reasons behind recent attempts by many

governments to stimulate tourism within their jurisdictions. However, in spite of the size and growth of the tourist market, its size is limited at any one time and therefore regions must compete with one another in order to attract tourists.

In spite of the intense competition and the benefits to be gained from tourism, government travel departments and private travel associations are ill-equipped to meet this challenge when compared to their counterparts in other industries. The tourist industry has not been able to adopt the sophisticated sales forecasting and planning techniques developed in other industries during the past few decades because of a lack of knowledge concerning the nature of the tourist market or the forces which affect it. In comparison to other highly competitive industries, virtually nothing is known about the potential market and yet large sums of money are spent on advertising and promotion without any analysis as to the probable results.

Analysis of the tourist market has been discouraged by several factors: the immense size of the market, the difficulty of measuring tourist flows, and the staggering number of factors which influence decisions to travel. The bewildering nature of the tourist market, however, is not reason enough to avoid an attempt at analysis and under-

standing.

A clear insight into the use of potential tourist flows in the analysis of present levels of tourist visits can lead to a realistic appraisal of a region's present and future status in the tourist industry. In addition, it can provide information as to present weaknesses (i.e. sectors of the market in which attraction is low) and thereby offer some guidelines for promotional activities. This knowledge, combined with forecasting techniques, can also aid in the planning of facilities necessary to meet future demand. An understanding of the future potential tourist market for a region is essential when planning a major recreational event such as an exposition. Although some research has been done in this specific area, the projections of most of the studies have tended to vary considerably from observed results.

This study attempts to add to the body of knowledge concerning the tourist market and thereby fill, to some extent, the gap which now exists. It is also hoped that this study will reveal some of the methodological weaknesses which exist in other studies.

The Organization of the Remainder of the Study

In the Introduction, the aims and significance of the study were discussed. In order to view these aims in

the context of the procedures and goals of other works in the same field, Chapter II examines a cross-section of relevant studies. Building on the findings of these other studies, Chapter III develops a methodology for the estimation of the potential tourist flows to a tourist region. Chapter IV inserts into the model the relevant data pertaining to the Province of Alberta and arrives at an estimation of the potential tourist flow to the Province. Chapter V lists the actual tourist flows to Alberta in 1966 from various geographic regions. These data were taken from a study conducted by Kates, Peat, Marwick and Company, and required slight adaptation in order to apply to the same base period and the same categories of travellers as were used in calculating the potential flows. This procedure facilitates the comparison between the actual and the potential flows which is given in Chapter VI. In Chapter VII, the model is reviewed and presented in general mathematical form. Additional applications of the model are also examined.

II. RESUME OF THE HISTORY AND PRESENT STATUS OF THE PROBLEM

The objectives of this study are to derive a method for estimating the potential tourist flow to a region, to compare the potential to the actual tourist flow, and to analyze the variance. This approach to studying the tourist industry has not been followed, or even suggested, by any of the published works on the subject. In the case of the application of the potential, this means that the study will be breaking new ground. The derivation of market potentials, however, is similar in essential aspects to the projection of future tourist flows or the prediction of attendance at major recreational events. Of the many studies which have been conducted in these areas, a selected number will be briefly summarized in order to give an indication of the development of methodology in the area.

No significant research was conducted prior to the Second World War on methods of predicting tourist flows. Shortly following the war, Hotelling suggested that demand functions for visits could be estimated on the basis of

visits from concentric bands drawn around a recreation area or event. Although distance has a deterrent effect in its own right, Hotelling used the variable as an estimate of what he considered the major deterrent to travel, namely travel costs. Hotelling's ideas were put into effect in a study by Clawson on visits to national parks in the United States which was completed in 1959.³

Clawson also conducted a study with Jack Knetsch entitled Economics of Outdoor Recreation which includes an examination of methods of predicting demand for recreation facilities.⁴ Those parts of their findings which are relevant to this study are discussed in context in later sections.

Much of the research which has been done regarding the tourist industry was conducted by private research firms in the course of studies for tourist regions or specific recreational events. Two such studies are described below.

The first study to be considered was prepared by W.C. Gilman and Company, Inc. for HemisFair in San Antonio, Texas.⁵ Included in the study was an estimation of the attendance potential for the proposed exposition. The methodology employed in such an estimation is similar to that required for an estimation of a potential tourist flow and therefore it will be of value to briefly review Gilman's

treatment of the relevant variables.

Income per capita and the distance from the center holding the event were recognized as the important variables in determining the potential market. Distances between zero and four hundred miles, and between four hundred and six hundred miles were treated as having equal deterency effects on potential patrons. All distances over six hundred miles were also considered equal in terms of their deterrent effect. Income was considered relevant within six hundred miles and was assumed to be directly proportional to attendance. To illustrate, if areas A and B had equal populations and were equal distances from the event but area A had 70% of the median income of B, attendance from area A would be 70% of that from area B.

Economic Research Associates also performed a study on the attendance potential of HemisFair 1968.⁶ Although their study utilized the same variables as did that by W.C. Gilman, the application of the methodology is considerably more sophisticated.

ERA set up three zones based on driving time from San Antonio (zero to two hours, two to six hours, and six hours to the Texas border). Although the reasoning behind this particular choice of limits is not given in the study, it is implied that ERA found some level of uniformity of

attendance from within these zones from data collected from previous events on a similar nature. ERA accounted for visitors from outside the Texas boundary by assuming a given percentage of the normal tourist flows to various parts of the State would attend. In dealing with the effect of income, ERA employed five income categories rather than median income, and assumed attendance to be directly variable with income category. Combining the two variables, distance and income, ERA further assumed that income affected the distances which people travel although the nature of the relationship was not discernible from the study.

Of the two studies described above, the Gilman study makes use of aggregate population characteristics, while the ERA study utilizes a less aggregative approach by including income distribution. The latter study also includes a cell analysis in which the interrelationship between income and distance is considered.

Each of the above approaches was dealt with in considerable detail in an unpublished Ph. D. dissertation by Wayne Boyet.⁷ Using aggregative data in projecting the demand for park recreation facilities, he isolated income per capita, distance, and population as the relevant variables to consider. It should be noted here that population was taken into account in the earlier studies since results

were expressed in percentages of the resident population. In applying his model, however, Boyet encountered difficulty with the income variable and was forced to drop it from his analysis.

Boyet also considered a cell analysis approach to the problem. In this case, he was able to isolate income distribution, paid vacation time, distance, and population as significant variables. Although Boyet showed that the latter model produced significantly different results from the former, it cannot be stated with certainty which of the two is more accurate.

The studies discussed in this chapter have presented varied approaches to the problem of predicting tourist flows. Although there is unity on many facets of the methodology, some aspects, the income variable in particular, have not been unanimously accepted or uniformly applied.

The following chapter is devoted to the selection of variables to be used in the estimation of potential tourist flows. Although the findings described in this chapter serve as a starting point in the search for these variables, both the variables and the manner of their application are carefully examined in Chapter III.

III. METHODOLOGY

The purpose of this chapter is to develop a methodology for estimating the potential number of tourists to visit a region. In theory, the potential flow of tourists could be measured through market testing, but since the cost of this procedure is prohibitively high, we have chosen to estimate the potential through the use of easily measured variables.

Just as the sales potential of a product depends on the market for the entire industry, so the potential tourist flow to a region is a function of the total market for tourism. Because the factors affecting the size of the total market for tourism may be somewhat different than those affecting the number of trips to a given region, we have separated this chapter into two parts: the first deals with the market for tourism in general; the second examines the factors affecting a tourist selection of the tourist region he will visit. These two forces together determine the potential tourist flow to a given region.

The Market for Tourism

The market for tourism in a given year is the total number of pleasure trips taken by tourists during that period. We can also express the total number of pleasure trips as a fraction of the resident population. This will be termed the propensity to travel for pleasure.

The market for tourism for North America, and for each of the states, provinces, and territories which comprise it, could be determined by market sampling techniques. The cost of such a procedure, however, is prohibitive and so some other means must be found for estimating the size of the market.

The extent of the market for tourism depends on the decision which every individual or family makes on whether or not to travel for pleasure during a given year. In reaching the decision, the positive features of a trip as anticipated by the individual are weighed against the expected negative aspects such as cost, fatigue, time, and risk of accident. Although the decision is often influenced by the characteristics of a given destination, most often the decision to travel precedes the choice of a location. Having considered the advantages and disadvantages, the individual compares the resultant vector to alternative uses of his time and money, and reaches a decision.

In estimating the propensity to travel for pleasure, Clawson suggests that we look to the socio-economic factors which affect the travel decision.⁸ Since the list of factors which affect the travel decision is so extensive, it is necessary to limit the analysis here to the following variables which show a high degree of correlation with propensity to travel for pleasure: age, income, life cycle stage, race, education, occupation, and size of place of residence.

Table 1 displays the relationship between the propensity to travel for pleasure and various income categories. As might be intuitively apparent, high income people are more likely to take at least one vacation trip per year. In addition, those in the higher income brackets who take trips travel slightly more frequently than those in the lower brackets.

Table 2 demonstrates that the level of education of the spending unit head is highly correlated with the number of spending units taking at least one trip per year. Spending unit heads with a college degree are four times as likely to take at least one vacation trip during a given year as those with eight years of schooling or less. There is very little difference, however, in the average number of trips taken by the spending unit heads who travel regardless of education level. That is, those with the least education

TABLE 1
VACATION TRIPS TAKEN, BY INCOME
OF SPENDING UNIT¹

Income of Spending Unit (\$)	1961		1962	
	% Taking at Least One Trip ²	No. of Trips per 100 SU's ³	% Taking at Least One Trip	No. of Trips per 100 SU's ⁴
Under 3,000	9	13	10	14
3,000- 4,999	20	25	21	27
5,000- 7,499	25	33	28	38
7,500- 9,999	49	62	46	61
10,000-14,999	59	95	57	81
15,000 or more	76	141	74	117
All incomes	27	37	30	42

¹Compiled from: George Katona, Charles A. Lininger, and Eva Mueller, 1963 Survey of Consumer Finances (Ann Arbor: University of Michigan, 1964), p. 116. This study is based on the findings of a statistically determined sample of 2036 interviews conducted in 66 regions throughout the United States.

²Refers only to trips by spending units that spent \$100 or more on vacation travel during the year under consideration.

³Four or more trips by a spending unit have been tabulated as four trips.

⁴For 1962 data, three or more trips by a spending unit have been tabulated as three trips which results in a slight understatement of values for the upper income brackets.

TABLE 2

VACATION TRIPS TAKEN, BY EDUCATION

OF SPENDING UNIT HEAD¹

Education of SU Head	% Taking at Least One Trip ²	No. of Trips per 100 SU's ²
8 years or less	13	17
Some high school	26	34
High school graduate	29	41
Some college	38	56
College degree	52	77
All spending units	27	37

¹Compiled from: George Katona, Charles A. Lininger, and Richard F. Kosobud, 1962 Survey of Consumer Finances (Ann Arbor: University of Michigan, 1963), p. 155.

²Refer to Table 1 for explanation of headings.

who take at least one trip, average 1.3 trips per spending unit. In the highest category, those who travel take an average of almost 1.5 trips. Therefore, it is the number of persons within each category who travel that accounts for the differences between categories, not the number of trips taken by each individual.

Table 3 relates the occupation of the spending unit head to the likelihood of him taking at least one trip for pleasure in a given year. Professionals and managers head the list, being almost four times as likely to take at least one vacation trip than the farmers at the other end of the scale. Although these results are closely correlated with those of Table 2, they do serve to illustrate the special situation faced by self-employed businessmen and farmers who, although their incomes and education may be higher than others who travel more frequently, find it difficult to leave their work for extended periods of time.

The relationship between the life cycle stage of the spending unit head and the propensity to travel for pleasure is revealed in Table 4. From the information given, it may be assumed that children significantly lower the propensity to travel for a spending unit head. Marriage, however, has the opposite effect, significantly increasing the probability of taking at least one trip. In fact, only in 1961 for

TABLE 3
VACATION TRIPS TAKEN, BY OCCUPATION
OF SPENDING UNIT HEAD¹

Occupation of SU Head	% Taking at Least One Trip ²
Professional	54
Managerial	52
Clerical, sales	38
Self-employed businessman	37
Craftsman, foreman	32
Operative	22
Laborer, service worker	19
Farmer	14
Retired	16
Miscellaneous	32
All spending units	30

¹Compiled from: Katona, 1963 Survey of Consumer Finances, p. 122.

²Trips taken in 1962 by spending units expending \$100 or more on vacation travel.

TABLE 4

VACATION TRIPS TAKEN, BY LIFE CYCLE STAGE

OF SPENDING UNIT HEAD¹

Life Cycle Stage of SU Head	1961		1962	
	% Taking at Least One Trip ²	No. of Trips per 100 SU's ²	% Taking at Least One Trip	No. of Trips per 100 SU's ²
<u>Under age 45</u>				
Single	31	41	24	40
Married				
No children	44	59	49	73
Children				
Under 6	27	39	30	41
Over 6	35	42	36	48
<u>45 or older</u>				
Married				
Children	28	48	31	42
No children				
Head employed	37	56	41	57
Head retired	15	22	21	27
Single				
Head employed	27	36	28	41
Head retired	12	20	15	20
Single with children	15	21	17	20
All spending units	27	37	30	42

¹Compiled from: Ibid., p. 121.²Refer to Table 1 for explanation of headings.

the age group under 45 did marriage fail to more than compensate for the existence of children. In addition, those who are retired show a marked decline in the propensity to travel from their employed counterparts.

Table 5 illustrates that age has comparatively little effect on the propensity to travel for pleasure. The propensity reaches a peak between the ages of 45 and 54, and drops to a low in the over 65 category.

Table 6 displays the higher propensity to travel for pleasure of the white race as compared to the non-white races. It is unfortunate that there is not sufficient detail to determine whether the difference is due to cultural dissimilarities or whether it is a function of the disparities in income levels.

From Table 7, it can be observed that the propensity to travel for pleasure is significantly higher in the suburban areas of the largest cities and in smaller cities as a whole than in the other areas considered.

The preceding section illustrates the correlation between the propensity to travel for pleasure and several causal factors. These variables bring out some of the differences in the propensities to travel found between individuals or between various strata of the population. It will be necessary in later sections of the study, however, to

TABLE 5
VACATION TRIPS TAKEN, BY AGE
OF SPENDING UNIT HEAD¹

Age of SU Head	% Taking at Least One Trip ²
18-24	25
25-34	33
35-44	33
45-54	35
55-64	30
65 or over	20
All spending units	30

¹Compiled from: Katona, 1963 Survey of Consumer Finances, p. 122.

²Trips taken in 1962 by spending units expending \$100 or more on vacation travel.

TABLE 6

VACATION TRIPS TAKEN, BY RACE

OF SPENDING UNIT HEAD¹

Race of SU Head	% Taking at Least One Trip ²
White	32
Non-white	12
All spending units	30

¹Compiled from: Katona, 1963 Survey of Consumer Finances, p. 122.

²Trips taken in 1962 by spending units spending \$100 or more on vacation travel.

TABLE 7

VACATION TRIPS TAKEN, BY PLACE OF RESIDENCE¹

Place of residence	% Taking at Least One Trip ²	No. of Trips per 100 SU's ²
12 largest SMSA's ²		
Central city	23	31
Suburban area	38	52
Other SMSA's over 50,000		
Central city	35	52
Suburban area	30	47
Adjacent areas ⁴	21	32
Outlying areas ⁵	19	23
All spending units	27	37

¹Compiled from: George Katona, Charles A. Lininger, and Richard F. Kosobud, 1962 Survey of Consumer Finances (Ann Arbor: University of Michigan, 1963), p. 154.

²Refer to Table 1 for explanation of headings.

³Standard Metropolitan Statistical Areas. The twelve largest are: Boston, Chicago, Detroit, Los Angeles, New York, Philadelphia, Pittsburgh, San Francisco, St. Louis, Washington, Baltimore, and Cleveland.

⁴Includes all areas other than those classified as suburban that lie within 50 miles of the central business district of a central city.

⁵All other areas not included above.

explain differences in the propensities demonstrated by the residents of geographic regions. Although there may be many factors which are highly correlated with propensity to travel, it is only necessary for us to isolate and use the factors which yield an adequate prediction of these differences between regions. For example, if Californians travel for pleasure more frequently than New Yorkers, can this and other similar differences be best accounted for by the fact that the former are richer, because California has a higher proportion of white citizens, or is it due to some other factor?

The following section examines the ability of each of the variables mentioned in the previous section to account for inter-regional differences in propensity to travel for pleasure. For this purpose, the United States (unfortunately, there are no Canadian data which can be used) has been divided into four major regions: Northeast, North Central, South, and West.⁹

Table 8 gives the measured propensity to travel for pleasure for each of the regions using several different bases. Regardless of the base, the propensity to travel is lowest in the Northeast region. The propensity is approximately equal in the South and North Central regions except in the case where households are used as a base.¹⁰ The West

TABLE 8

PROPENSITY TO TRAVEL, BY REGION OF ORIGIN¹

	Regions				
	U.S.	NE	NC	S	W
Person-trips ² per Person ³	2.35	1.91	2.36	2.53	2.81
Person-trips per Household ³	7.94	6.58	7.77	8.97	9.19
Trips per Adult 1962 ⁴	3.73	3.11	3.85	3.80	4.41
Trips per Adult 1955 ⁴	3.01	2.32	3.05	3.11	3.20

¹It should be noted that this table considers total travel, not travel for pleasure only.

²Each time a person takes a trip over 100 miles or overnight, a person-trip is counted.

³Compiled from: U.S., Department of Commerce, Bureau of the Census, Census of Transportation, 1963, Vol. I, Passenger Transportation Survey, p. 47.

⁴John B. Lansing and Dwight M. Blood, The Changing Travel Market (Ann Arbor: University of Michigan, 1964), p. 220. The data are a result of a statistically determined sample containing 4,210 adults in 1955, and 5,329 adults in 1962, drawn from all parts of the United States. The data includes only those trips over 100 miles. Adults taking two to four trips have been tabulated as taking three trips, five to fifteen tabulated as ten trips, and sixteen or more trips have been tabulated as sixteen trips.

shows the highest propensity in each case.

In the following section, these actual propensities are compared¹¹ to theoretical propensities to travel for pleasure¹² derived from coefficients of the variables discussed above and United States census data. Some of the variables mentioned in the preceding section as being highly correlated with the propensity to travel for pleasure have not been dealt with in detail in this section for one of two reasons. Race, education, and occupation yielded essentially similar results to those derived using income. The cross-sections of age and life cycle stage in each region were found to be so similar that there was virtually no difference between the prediction made by the variable and that made by the average propensity for the United States. Little is added to the logical or operational validity of the model by including these highly correlated variables since they do not contribute to the explanation of inter-regional differences.

Median income.--For the first variable which will be tested for its ability to account for the inter-regional differences in propensity to travel, we return to the methodology employed by W.C. Gilman. A glance at Table 9 shows that median income does not account for these differences. According to

TABLE 9

MEDIAN INCOME OF FAMILIES, BY REGION¹

	Regions				
	U.S.	NE	NC	S	W
Median income	\$5,620	6,191	5,892	4,465	6,328
Ratio ²	1.00	1.10	1.05	0.79	1.13
Ratio ³	1.00	0.83	0.98	1.13	1.16

¹Source: U.S., Department of Commerce, Bureau of the Census, Census of the Population, 1960, Number of Inhabitants, p. 1-288. Also, Supra, p. 25.

²The ratio of the regional median income to that of the total United States.

³The ratio of the propensity to travel for each region to that for the United States.

the methodology of the Gilman Report, the Northeast region should boast a propensity approximately 40% higher than that of the South. Observed data, however, illustrate that the propensity is approximately 25% lower than that of the South. Median income, therefore, is not a major determinant of differences in propensity to travel for pleasure.

Income.--The propensities to travel for pleasure for various income categories are given in Table 10. These data have been used to calculate the theoretical propensities¹³ for the four regions (Table 11). The theoretical propensities suggest that the South has fewer travellers per capita than the other regions, with the Northeast and West having the highest. A chi-square goodness-of-fit test on the theoretical propensities and the observed propensities gives a value for chi-square of 1.14 for the person-trips per household data, and a value of .27 for the person-trips per person. These values indicate a good fit at the 0.05 level of significance since the chi-square critical value is 3.841.

The fit, however, is not as good as that derived by using the average propensity for the total United States in place of the theoretical propensities (chi-square values of .66 and .23 respectively). This suggests that it would be more advantageous to simply apply the average value rather

TABLE 10

PROPENSITY TO TRAVEL FOR PLEASURE, BY INCOME¹

Income Category (\$)	Person-trips ² per Household	Person-trips per Person
Under 2,000	2.59	1.06
2,000- 4,000	4.21	1.32
4,000- 6,000	6.84	1.90
6,000-10,000	9.36	2.48
Over 10,000	11.29	2.87
All incomes	6.83	2.02

¹Compiled from: U.S., Census of Transportation, 1963, p. 47.

²Each time a person takes a trip, a person-trip is counted.

TABLE 11

THEORETICAL PROPENSITY TO TRAVEL, BY REGION OF ORIGIN, BY INCOME

Income (\$)	Under 2,000	2,000-4,000	4,000-6,000	6,000-10,000	Over 10,000	All Groups
Region	Item ¹	Item ²	Item ³			
Northeast	7.9 .20 .08	14.9 .63 .20	24.9 1.70 .47	34.4 3.23 .85	17.9 2.02 .51	100. 7.78 2.12
NorthCentral	11.2 .29 .11	16.2 .68 .21	24.0 1.64 .45	33.1 3.10 .82	15.5 1.75 .45	100. 7.46 2.05
South	21.3 .55 .22	23.4 .99 .31	21.8 1.49 .42	23.2 2.17 .58	10.3 1.16 .30	100. 6.36 1.82
West	8.9 .23 .09	14.9 .63 .20	22.2 1.52 .42	34.9 3.27 .87	19.0 2.15 .55	100. 7.79 2.12
United States	13.1 .34 .14	17.8 .75 .23	23.3 1.59 .44	30.8 2.88 .76	15.1 1.25 .43	100. 6.81 2.00

¹Percent of regional population. Source: U.S., 1960 Census of the Population, Number of Inhabitants, p. 1-286.

²Person-trips per total regional households.

³Person-trips per total regional population.

than attempt to account for regional differences using income distribution.

This finding runs contrary to the literature summarized in the foregoing chapter. It may help to explain, however, Boyet's difficulty in applying the income variable. He encountered a negative correlation when dealing with Southern areas due to the higher propensity to travel of its citizens.

The finding that people in the South demonstrate a higher propensity to travel than those in similar income groups in other parts of the country is substantiated by Table 12. In person-trips per household, the South boasts the highest propensities while in person-trips per person, it is surpassed by the West in several categories. It should be noted however, that the South has a low average propensity for its total population because of the larger proportion of persons in the lower income groups.

Thus Table 12 substantiates the finding that income is a poor variable to choose for predicting a national or international travel flow. Such an estimate requires a variable which has an equal effect on travel patterns in all sectors of the country. Table 12 shows that the propensity to travel for pleasure for a given income category varies significantly from region to region, sometimes by as

TABLE 12

PROPENSITY TO TRAVEL FOR PLEASURE, BY REGION,

BY FAMILY INCOME¹

Family Income (\$)	Regions				
	U.S.	NE	NC	S	W
<u>Person-trips per Household</u>					
Under 2,000	2.59	2.15	2.23	2.98	2.66
2,000- 3,999	4.21	3.13	4.14	5.14	3.97
4,000- 5,999	6.84	4.34	7.30	8.76	8.20
6,000- 9,999	9.36	7.07	8.29	13.56	9.75
Over 10,000	11.29	8.61	12.01	15.12	10.65
All incomes	6.83	5.47	6.66	7.86	8.08
<u>Person-trips per Person</u>					
Under 2,000	1.06	1.09	1.24	.95	1.32
2,000- 3,999	1.32	1.05	1.53	1.38	1.23
4,000- 5,999	1.90	1.21	1.98	2.39	2.49
6,000- 9,999	2.48	1.88	2.06	3.65	2.82
Over 10,000	2.87	2.02	3.16	3.97	2.80
All incomes	2.02	1.58	2.03	2.20	2.48

¹Source: U.S., Census of Transportation, 1963, p. 47.

much as 100 percent. Income distribution may affect the travel decision for an individual or a family, but there must be some other underlying cause for these differences in travel patterns between groups of people in the same income category.

Place of residence.--The data in Table 13 give the propensity to travel for pleasure by place of residence. The conversion from the base of trips per adult to that of trips per person was accomplished through the use of a coefficient, 0.630, which is the relationship between the two bases for the United States. These data have been used in calculating the theoretical propensities to travel for pleasure for the four major regions. These theoretical propensities, shown in Table 14, suggest that the Southern region should have the highest proportion of citizens who travel while the Northeast should have the lowest. A chi-square goodness-of-fit test on the data shows that the place of residence variable is a significant estimator of actual trips per person by region. The chi-square value for place of residence was 0.19 which compares favorably to the chi-square value (0.23) obtained by using the average propensity for the United States.

TABLE 13

PROPENSITY TO TRAVEL FOR PLEASURE, BY PLACE

OF RESIDENCE¹

Place of Residence	Trips per Adult ²
12 largest SMSA's	
Central cities	2.04
Suburbs over 2,500	3.90
Other suburbs	1.69
Other SMSA's	
Urban	4.46
Rural	3.48
Other areas	
2,500-49,999	3.84
Under 2,500	3.39
Rural	3.21
All areas	3.73

¹Calculated from: John B. Lansing, William Ladd, and Nancy Barth, The Travel Market 1961-1962 (Ann Arbor: University of Michigan, 1963), pp. 57,59,60.

²Two to four trips by an adult have been calculated as three trips, five to fifteen as ten, and over sixteen as sixteen trips.

TABLE 14

THEORETICAL PROPENSITY TO TRAVEL, BY PLACE OF RESIDENCE, BY REGION¹

Place of Residence	Regions								
	U.S.		NE		NC		S		W
	% of Pop.	Trips/Adult	% of Pop.	Trips/Adult	% of Pop.	Trips/Adult	% of Pop.	Trips/Adult	% of Pop.
12 Largest SMSA's									
Central Cities	13.1	.27	24.8	.51	13.3	.27	3.1	.06	14.0 .29
Suburbs 2,500 +	10.2	.40	14.6	.57	10.5	.41	2.1	.08	18.3 .71
Other Suburbs	1.4	.02	2.5	.04	1.5	.03	.8	.01	.8 .01
Other SMSA's									
Urban	30.8	1.37	28.7	1.28	27.9	1.24	34.8	1.55	31.6 1.41
Rural	7.4	.26	8.5	.30	6.8	.24	7.3	.25	7.1 .25
Other Areas									
2,500-49,999	14.3	.55	9.6	.37	15.5	.60	17.7	.68	13.0 .50
Under 2,500	2.9	.10	1.7	.06	3.5	.12	3.6	.12	2.4 .08
Rural	19.8	.64	9.6	.31	21.0	.67	30.6	.98	12.8 .41
All Areas	100.0	3.60	100.0	3.45	100.0	3.58	100.0	3.74	100.0 3.65

¹Compiled from: Lansing, The Travel Market 1961-1962, p. 57; also, U.S., 1960 Census of the Population, Number of Inhabitants, p. 1-27, p.XXV; also, U.S., 1960 Census of the Population, U.S. Summary, p. 1-113.

Summary.--The data which have been presented in this section indicate that income is not the sole determinant of propensity to travel as has been indicated in the literature, nor does it adequately predict differences in the propensity between regions. The best indicator of these differences, from among the variables on which sufficient data were available, was found to be place of residence.¹⁴ It must be recognized, however, that this independent variable is only an index of many causal factors and is not intended as a complete explanation of propensity to travel.

The present model has only attempted to take into consideration static differences between regions. The variables tested were evaluated on their ability to account for these static differences. At some late time, it may be helpful to take into consideration yearly changes in the propensity to travel for pleasure within each region. For that purpose, some of the variables rejected here may take on renewed importance.

Choice of Destination

In the foregoing section, the factors affecting the market for tourism were examined. In this section, the factors which influence the share of that market which can be captured by an individual region will be assessed.

The travel decision, as discussed earlier, is the process of weighing the positive aspects of travel against the negative. The decision as to the destination of the trip is simply an extension of the travel decision: the perceived positive features of a trip package are weighed against the negative aspects. The individual will choose the trip package which he perceives as giving him the greatest satisfaction. Within the scope of this study, it is not possible to assess the effect which a given tourist region's characteristics will have on an individual's choice of destination decision. So much of this depends on his reaction to publicity, competing attractions, and many other factors. There are, however, important facets of the choice of destination decision which can be generalized. This section examines several of these.

Distance from residence to destination.--Among the negative aspects of a trip package is its cost in terms of both money and time. Time is directly related to distance travelled and there is a strong indication that monetary cost is also tied to distance. In addition to illustrating the tendency for distance to vary as cost, and for visits per capita to be inversely proportional to both, Table 15 supports the findings of the previous section of this study which asserted

TABLE 15

VISITS TO LEWIS AND CLARK LAKE,
AND EXPENDITURES PER VISIT,
BY DISTANCE ZONES (SUMMER, 1959)¹

Distance Zone (miles)	Visits per 1,000 Base Population	Average One-way Distance	Est. Cost per Visit (party of four)
Under 50	3,784	18	\$ 3.70
50-100	892	70	13.80
100-150	106	123	27.10
150-200	153	175	37.90
Over 200 ²	4	228	41.25

¹Source: Clawson, Economics of Outdoor Recreation, p. 65, adapted from Table 1 in "A Measurement of the Demand for Recreational Facilities at Lewis and Clark Lake" by John S. Evans and Carlton S. Van Doren, Business Review Supplement (Vermillion, South Dakota Business Research Bureau, School of Business, State University of South Dakota, February, 1960).

²The total survey area is not given by Clawson but since the average distance for zone 5 is 228 miles, it is probable that the outside boundary is approximately 250 miles.

that propensity to travel for pleasure depends closely on the population of the place of residence of the tourist. The following explanation of Table 15 is given by Clawson and Knetsch:

...although the distance--and thus cost, is greater in the fourth than in the third zone, the number of visitors per 1,000 base population is also higher. Aside from possible data discrepancies, if all other things were equal, this would be contrary to expectation. A closer inspection of the data suggests an explanation. Relatively larger cities are particularly important in the second and fourth zones.¹⁵

The studies referred to in Chapter I employed distance from residence to destination as a variable affecting choice of destination. Table 16 substantiates these results by illustrating that the proportion of tourists taking a trip of a given distance varies inversely with the distance.

These data, however, are an oversimplification for the purposes of this study. They consider only the most distant place reached on the trip. All of those who travel by automobile and many who travel by other modes, pass through and stopover at intermediate places along the way. Although the economic impact in these areas may not be as great as in the areas of primary destination, the expenditures made by these tourists are nonetheless important. Thus the percentages given in Table 16 are understated, particularly in the lower mileage categories where the

TABLE 16

MILES TO MOST DISTANT PLACE REACHED

ON LAST TRIP¹

Distance (miles)	Tourists (%)
100- 199	37.1
200- 299	17.7
300- 399	12.7
400- 499	6.3
500- 749	8.3
750- 999	3.8
1000-1499	5.7
Over 1500	8.3
Total	100.0

¹Source: Lansing, The Travel Market 1961-1962,
p. 85.

influence of the passing through visits is the greatest.

In order to correct this weakness, all tourists who travel by car have been treated as visiting twice each zone through which they pass. Table 17 shows the revised tabulations based on this assumption.

In addition to including in each mileage category the automobile passages through it, Table 17 has altered Table 16 by breaking down the larger categories into zones of 100 miles and by closing the open ended class at a width 1500 miles. Thus, the table gives the potential share of the total tourist visits (including automobiles passing through) for each mileage zone. The pattern that emerges from the data is not intended to be applicable to every region but merely to serve as an average cross-section of total tourist visits to various mileage zones.

To this point in the discussion of the effects of travel costs (distance) on travel patterns, we have not attempted to determine whether there are other factors which influence the choice of destination decision. One of the points of methodology employed by Economic Research Associates in the study referred to earlier, was an effect on choice of destination by income. In other words, income not only affects whether or not an individual or family will travel, it also influences the distance he will travel.

TABLE 17

TRAVEL PATTERNS TO CONCENTRIC DISTANCE ZONES

FROM PLACE OF RESIDENCE^a

Distance (miles)	Furthest Point Trip Reached	Passed Through Visits	Total Visits
100- 200	37.1	90.8	127.9
200- 300	17.7	61.2	78.9
300- 400	12.7	40.8	53.5
400- 500	6.3	31.4	37.7
500- 600	4.3	24.8	29.1
600- 700	3.0	20.2	23.2
700- 800	1.8	17.6	19.4
800- 900	1.6	15.6	17.2
900-1000	1.4	14.0	15.4
1000-1100	1.3	12.6	13.9
1100-1200	1.2	11.3	12.5
1200-1300	1.1	10.1	11.2
1300-1400	1.1	8.9	10.0
1400-1500	1.0	7.8	8.8
1500-1600	1.0	6.8	7.8
1600-1700	0.9	5.8	6.7
1700-1800	0.8	4.9	5.7
1800-1900	0.8	4.1	4.9
1900-2000	0.7	3.4	4.1
2000-2100	0.7	2.7	3.4
2100-2200	0.6	2.1	2.7
2200-2300	0.6	1.6	2.2
2300-2400	0.5	1.2	1.7
2400-2500	0.4	0.8	1.2
2500-2600	0.4	0.5	0.9
2600-2700	0.3	0.3	0.6
2700-2800	0.3	0.1	0.4
2800-2900	0.2	... ^b	0.2
2900-3000	0.1	...	0.1
Over 3000	...	...	...

^aCompiled from: Lansing, The Travel Market 1961-1962, p. 85.

^bLess than one tenth of one percent of the residents will chose a destination, or will pass through a region, this distant from their home.

This suggests that the pattern of distances travelled by the tourists from a region can be adjusted according to the cross-section of the income distribution of the region.

Table 18 shows a cross-reference between distance and income: it gives the percentage of tourists in each income category who take trips of given distances. Contrary to showing a clear pattern of increasing length of trip with increasing income, as was indicated by the Economic Research methodology, there is a lack of any relationship whatsoever. It can be therefore concluded that an individual's income is not a significant factor in predicting the length of the trips he takes.

International borders.--Another factor which may affect the choice of destination of tourists is an international border. Table 19 illustrates through data from Century 21, a World's Fair held in Seattle in 1961, that the attendance from the other side of the international border between the United States and Canada was lower than from places of equal distance but within the same country. British Columbia had a lower rate of penetration¹⁶ than did Oregon in spite of the fact that the main mass of the population in the former lies closer to Seattle than that of the latter. Although British Columbia is larger in area than Oregon, only those parts of

TABLE 18

LENGTH OF TRIPS, BY INCOME CATEGORIES¹

(Percent of all tourists spending over \$100)

Family Income (\$)	Distance (miles)					Total
	Under 250	250- 500	500- 1000	1000- 2000	Over 2000	
Under 3,000	11	11	33	22	22	100
3,000- 5,000	15	10	30	25	20	100
5,000- 7,500	16	24	20	28	12	100
7,500-10,000	15	32	21	23	9	100
10,000-15,000	10	22	29	29	10	100
Over 15,000	17	11	18	32	22	100

¹Compiled from: Katona, 1962 Survey of Consumer Finances, p. 156.

TABLE 19
PENETRATION OF SELECTED MARKETS
BY THE SEATTLE WORLD'S FAIR¹

Market	% Penetration
King County	240
Balance of Washington	80
Oregon	30
British Columbia	19
California	12

¹Source: Economic Research Associates, "The Economic Feasibility of a Major Fair in San Antonio," p. 45.

the Province which are sparsely populated lie further away from Seattle than the furthest point within Oregon's borders.

Sufficient data were not collected at the time of the exposition to enable us to determine if this phenomenon could be attributed to a higher propensity to travel among the residents of Oregon; nor are data available from other similar events in order to prove that international borders represent a statistically significant factor affecting the choice of destination of North Americans. Since the existence of an international border effect on travel cannot be proven at this time, the variable cannot be included in our methodology. It should be remembered, however, in considering later parts of this thesis, that there are indications that such a relationship exists.

Summary

Whether or not an individual takes a pleasure trip during a given year, and the destination he chooses if he does travel, are both related to many causal factors. In this chapter, most of these factors were shown to be poor predictors of inter-regional differences in propensity to travel for pleasure, and did not adequately account for the observed patterns of the destinations of these trips. Only the place of residence of an individual gave a better

prediction of his likelihood to travel for pleasure than use of the average propensity to travel for pleasure would have done. Distance was isolated as the best indicator from the factors affecting choice of destination. These two variables, place of residence and distance to destination, will act as indices of all the factors affecting propensity to travel for pleasure and choice of destination respectively in the methodology of this model.

IV. APPLICATION OF THE METHODOLOGY

The methodology developed in the previous chapter is utilized in this chapter to calculate an estimate of the market potential for tourism in the Province of Alberta. In the process of applying the generalized methodology to a specific case in which all of the necessary information is not available, several assumptions become essential.

First, the lack of Canadian data corresponding to the American data on which the methodology is based, forces us to assume that the significant relationships are similar in the two countries. That is, that the propensity to travel for pleasure is the same in Canada as it is in the United States for each of the categories of place of residence, and that distance has a similar effect on the choice of destination for trips originating in Canada. The effect of the former assumption is minimized since the variable was chosen because it best accounted for the differences between regions.

Another assumption which becomes necessary concerns the passage of time between the collection of the data upon

which the model is based (1962) and the date of the survey data to which the model will be applied (1966). It is likely that the propensity to travel for pleasure increases over time¹⁷, and it is also probable that the distances which tourists travel are affected.¹⁸ However, sufficient data which isolate these precise variables have not been collected in any year other than 1962 in order to enable us to determine the rate of change of the variables. While the assumption that the relationships which were measured in 1962 are equally applicable in 1966 does detract from the validity of the absolute levels of the estimates of the potential tourist flows from various geographic regions, it should not affect the relative levels of these estimates. Since the model's application is as a standard, not as a prediction, the level of the propensity for one region relative to the other regions is far more essential than the absolute level of the propensity.

The steps taken in calculating the estimate of the potential tourist market for Alberta are briefly summarized in the following discussion.

The total market, the North American continent, was divided into 63 zones based on political boundaries. Table 20 lists the state, province, or territory which comprises each zone or sub-market. The only exception to the use of

TABLE 20

TOTAL POTENTIAL PERSON-TRIPS, BY SUB-MARKET

Sub-market	Person-trips ¹ per person	Population ² (000)	Total Person-trips (000)
British Columbia ³	1.943	944	1,834
Vancouver area	2.716	930	2,526
Manitoba	2.238	963	2,155
New Brunswick	2.037	617	1,257
Newfoundland	1.882	493	928
Northwest Territories	1.931	29	56
Nova Scotia	2.177	756	1,646
Ontario	2.366	6,961	16,468
Prince Edward Island	1.936	109	211
Quebec	1.881	5,781	10,875
Saskatchewan	2.092	955	1,998
Yukon	2.071	14	29
Alabama	2.167	3,511	7,608
Alaska	1.978	265	524
Arizona	2.333	1,603	3,740
Arkansas	2.041	1,956	3,992
California	2.002	18,802	37,642
Colorado	2.342	1,955	4,579
Connecticut	2.361	2,878	6,795
Delaware	2.285	513	1,172
Florida	2.310	5,893	13,613
Georgia	2.178	4,445	9,681
Hawaii	2.361	727	1,716
Idaho	2.011	697	1,402
Illinois	1.821	10,786	19,641
Indiana	2.211	4,951	10,947
Iowa	2.132	2,760	5,884
Kansas	2.179	2,275	4,957
Kentucky	2.377	3,181	7,561
Louisiana	2.231	3,617	8,070
Maine	2.089	978	2,043
Maryland	1.730	3,611	6,247
Massachusetts	2.117	5,403	11,438
Michigan	1.963	8,468	16,623
Minnesota	2.228	3,572	7,958
Mississippi	1.991	2,337	4,653
Missouri	1.962	4,564	8,955

TABLE 20 (Continued)

Sub-market	Person-trips per Person	Population (000)	Total Person-trips (000)
Montana	2.093	702	1,469
Nebraska	2.156	1,439	3,102
Nevada	2.335	431	1,006
New Hampshire	2.104	676	1,422
New Jersey	2.418	6,899	16,682
New Mexico	2.159	1,002	2,202
New York	1.753	18,205	31,913
North Carolina	2.044	4,974	10,167
North Dakota	2.005	643	1,289
Ohio	2.174	10,364	22,531
Oklahoma	2.247	2,477	5,566
Oregon	2.215	1,973	4,370
Pennsylvania	1.910	11,601	22,158
Rhode Island	2.425	898	2,178
South Carolina	2.074	2,589	5,370
South Dakota	2.016	679	1,369
Tennessee	2.161	3,866	8,354
Texas	2.310	10,747	24,826
Utah	2.329	1,007	2,345
Vermont	1.979	411	813
Virginia	2.190	4,465	9,778
Washington	2.275	3,040	6,916
Washington D.C.	1.210	806	975
West Virginia	2.064	1,809	3,734
Wisconsin	2.211	4,167	9,213
Wyoming	2.114	319	674

¹Calculated from: U.S., Department of Commerce, Bureau of the Census, United States Census of Population: 1960, Vol. I, Characteristics of the Population, pts. 1-52, Tables 1, 12. Also, Canada, Department of Trade and Commerce, Dominion Bureau of Statistics, 1966 Census of Canada, Vol. I (1-7), Vol. I (1-8). Also, Supra, Table 14, p. 35.

²1966 Population. Source: U.S., Bureau of the Census, Statistical Abstract of the United States: 1968, (87th ed.), Washington D.C., 1968, p. 12. Also, Canada, 1966 Census, Vol. I (1-13).

³Does not include Vancouver area.

political boundaries was the lower mainland (Vancouver area) of British Columbia which was separated from the remainder of the Province. This was done in order that the model would provide the maximum possible refinement in the sizes of the sub-markets, while coinciding with the actual data provided by the Kates, Peat, Marwick and Company survey.

The population of each sub-market was divided into its component parts according to place of residence.¹⁹ The propensity to travel for pleasure for each component part (expressed in terms of pleasure trips per person as given in Table 21) was multiplied by the proportion of the population in that component. The sum of these products for each of the sub-markets represents the number of person-trips per capita for the region (Column 2, Tabel 20). This process individually weights the propensity to travel for pleasure for each sub-market according to the proportion of its population in each place of residence category. These figures, when multiplied by the 1966 population of the appropriate sub-market, give the total number of pleasure trips taken by the residents of the sub-market (also shown in Table 20). We have thus arrived at an estimate of the total tourist market in each of the regions and in the continent as a whole.

Since it is not reasonable to expect that all the

TABLE 21
 PROPENSITY TO TRAVEL FOR PLEASURE,
 BY PLACE OF RESIDENCE¹

Place of Residence	Trips per Adult ²	Percent Non- business	Pleasure Trips/ Adult	Pleasure Trips/ Person
12 largest SMSA's				
Central cities	2.04	.94	1.92	1.21
Suburbs over 2,500	3.90	.93	3.63	2.29
Other suburbs	1.69	.91	1.54	.97
Other SMSA's				
Urban	4.46	.90	4.01	2.53
Rural	3.48	.93	3.24	2.04
Other areas				
2,500-49,999	3.84	.91	3.49	2.20
Under 2,500	3.39	.96	3.25	2.05
Rural	3.21	.89	2.86	1.80
All areas	3.73	.91	3.39	2.14

¹Calculated from: Lansing, The Travel Market 1961-1962, pp. 57, 59, 60.

²Two to four trips by an adult have been tabulated as three trips, five to fifteen as ten and over sixteen as sixteen trips.

tourists in North America could or would visit any one tourist resort in a given year, it was necessary to discover some means of determining the proportion of the total tourist market which any one region (in particular, Alberta) has the potential to attract. In Chapter III we determined that distance was a major factor affecting a tourist's choice of destination. Therefore, we have used this variable to estimate the potential tourist flow to Alberta. Employing the concept of concentric zones or bands drawn around a sub-market, we determined the distance from each sub-market to the band or bands in which the tourist region, Alberta, is located (Column 3, Table 22). For this purpose, we have taken the road mileage from the most central city of each sub-market (Columns 1 and 2, Table 22). It has been assumed that the Province is only 400 miles square since the tourist flows to the northern half of the Province are relatively light due to poor road, rail, and air services.

In order to determine what proportion of tourists travel from each sub-market to a destination as far away as Alberta, it was necessary to have a quantitative relationship for the effect of distance on choice of destination. Such a relationship was given in Table 17, page 42. Column 4 of Table 22 is based on these data and represents the sum of two percentages: the percentage of tourists who choose a

TABLE 22

PROPENSITY TO VISIT SELECTED MILEAGE BANDS,

BY SUB-MARKET

Central City of Sub-market	Mileage to Alta. Border ^a	Mileage Bands	Propensity to Visit Bands ^b
Kelowna, B.C.	275	300- 700	.465
Vancouver	535	500- 900	.263
Winnipeg, Manitoba	627	600-1000	.218
Fredricton, N.B.	2,668	2700-3100	.006
St. John's, Nfld.	3,754	3800-4200	 ^c
Yellowknife, NWT.	332	300-1100	.450
Halifax, Nova Scotia	2,997	3000-3400	
Toronto, Ontario	1,863	1900-2300	.042
Charlottetown, P.E.I.	3,009	3000-3400	
Montreal, Quebec	2,086	2100-2500	.029
Regina, Saskatchewan	273	300- 700	.465
Whitehorse, Yukon	878	900-1700	.143
Birmingham, Alabama	2,149	2100-2500	.029
Anchorage, Alaska	1,600	1600-2400	.036
Phoenix, Arizona	1,369	1400-1800	.086
Little Rock, Arkansas	1,768	1800-2200	.049
Fresno, California	1,339	1300-1700	.098
Denver, Colorado	912	900-1300	.151
New Haven, Connecticut	2,501	2500-2900	.012
Wilmington, Delaware	2,203	2200-2600	.024
Tampa, Florida	2,726	2700-3100	.006
Atlanta, Georgia	2,195	2200-2600	.024
Honolulu, Hawaii	3,209	3200-3600	
Boise, Idaho	661	700-1100	.187
Peoria, Illinois	1,571	1600-2000	.066
Indianapolis, Indiana	1,627	1600-2000	.066
Des Moines, Iowa	1,310	1300-1700	.098
Wichita, Kansas	1,449	1400-1800	.086
Lexington, Kentucky	1,860	1900-2300	.042
Baton Rouge, Louisiana	2,134	2100-2500	.029
Lewiston, Maine	2,298	2300-2700	.019
Baltimore, Maryland	2,172	2200-2600	.024
Worcester, Massachusetts	2,454	2500-2900	.012
Lansing, Michigan	1,665	1700-2100	.057
Minneapolis, Minnesota	1,055	1100-1500	.121
Jackson, Mississippi	2,049	2000-2400	.036
Jefferson City, Missouri	1,534	1500-1900	.076

TABLE 22 (Continued)

Central City of Sub-market	Mileage to Alta. Border	Mileage Bands	Propensity to Visit Bands
Great Falls, Montana	125	100- 500	1.052
Lincoln, Nebraska	1,213	1200-1600	.110
Las Vegas, Nevada	1,075	1100-1500	.121
Concord, New Hampshire	2,560	2600-3000	.009
Trenton, New Jersey	2,276	2300-2700	.019
Albuquerque, New Mexico	1,236	1200-1600	.110
New York, New York	2,315	2300-2700	.019
Winston-Salem, N.C.	2,215	2200-2600	.124
Bismark, North Dakota	628	600-1000	.218
Columbus, Ohio	1,779	1800-2200	.049
Oklahoma City, Oklahoma	1,529	1500-1900	.076
Eugene, Oregon	754	800-1200	.168
Harrisburg, Penn.	2,135	2100-2500	.029
Providence, Rhode Island	2,437	2400-2800	.015
Columbia, S.C.	2,406	2400-2800	.015
Sioux Falls, S.D.	1,011	1000-1400	.136
Nashville, Tennessee	1,939	1900-2300	.042
Austin, Texas	1,818	1800-2200	.049
Salt Lake City, Utah	712	700-1100	.187
Montpelier, Vermont	2,187	2200-2600	.024
Richmond, Virginia	2,256	2300-2700	.019
Seattle, Washington	529	500- 900	.263
Washington, D.C.	2,178	2200-2600	.024
Charleston, W.Va.	1,807	1800-2200	.049
Madison, Wisconsin	1,341	1300-1700	.098
Casper, Wyoming	623	600-1000	.218

^aSource: Alberta Motor Association road mileage data.

^bSource: Supra, p. 43.

^cPropensities of less than one tenth of one percent have not been calculated.

primary destination located in the same mileage bands in which Alberta is found; and, the percentage of tourists who choose a destination more distant than these mileage bands to which they travel by automobile, thereby passing through the zone in which Alberta is located. As an illustration, the potential number of visits made to Alberta, either as a primary destination or in passing through, by the residents of Vancouver is equal to 26.3% of the population of that area. Column 2 of Table 23 converts these propensities into the number of person-trips from each of the sub-markets.

To this point, we have arrived at the number of tourists from each of the sub-markets who visit the mileage bands of which Alberta is a part. If Alberta makes up a given proportion, say 10% by area, of the total mileage band accessible to tourists, we have assumed that the Province has the potential to attract 10% of the tourists which visit that band. This follows from our stated assumption that Alberta possesses an average degree of attraction power per square mile, and thus tourist flows would be the same as if tourists chose their destinations at random. Table 23, Column 3, shows the proportion of each mileage band which Alberta occupies. By multiplying this proportion by the number of person-trips to the band, given in Column 2, we arrived at the estimate of the total number of potential

TABLE 23

POTENTIAL PERSON-TRIPS TO ALBERTA^a

Sub-market	Person- trips to Band	Proportion of Mileage Band	Potential Person-trips to Alberta
British Columbia	853	.25	213
Vancouver area	664	.22	146
Manitoba	470	.14	66
New Brunswick	9	.18	2
Newfoundland	... ^b	...	...
Northwest Territories	25	.33	8
Nova Scotia	...	...	...
Ontario	692	.13	90
Prince Edward Island	...	...	...
Quebec	315	.15	47
Saskatchewan	929	.23	214
Yukon	43	.33	14
Alabama	221	.20	44
Alaska	19	.33	6
Arizona	322	.09	29
Arkansas	196	.07	14
California	3,689	.16	590
Colorado	691	.07	48
Connecticut	82	.14	11
Delaware	28	.13	4
Florida	82	.25	21
Georgia	232	.25	58
Hawaii	...	...	...
Idaho	262	.07	18
Illinois	1,296	.15	194
Indiana	723	.15	108
Iowa	577	.12	69
Kansas	426	.11	47
Kentucky	318	.20	64
Louisiana	234	.07	16
Maine	39	.14	5
Maryland	150	.19	29
Massachusetts	137	.14	19
Michigan	948	.15	142
Minnesota	963	.09	87
Mississippi	168	.20	34
Missouri	681	.12	82

TABLE 23 (Continued)

Sub-market	Person- trips to Band	Proportion of Mileage Band	Potential Person-trips to Alberta
Montana	1,545	.11	170
Nebraska	341	.11	38
Nevada	122	.09	11
New Hampshire	13	.14	2
New Jersey	317	.16	51
New Mexico	242	.09	22
New York	606	.13	79
North Carolina	244	.19	46
North Dakota	281	.07	20
Ohio	1,104	.15	166
Oklahoma	423	.07	30
Oregon	734	.24	176
Pennsylvania	643	.13	84
Rhode Island	33	.14	5
South Carolina	81	.25	20
South Dakota	186	.07	13
Tennessee	351	.07	25
Texas	1,216	.20	243
Utah	439	.07	31
Vermont	20	.14	3
Virginia	156	.19	30
Washington	1,820	.07	127
Washington D.C.	23	.19	4
West Virginia	183	.19	35
Wisconsin	903	.16	144
Wyoming	147	.07	10

^aCalculated from: Supra, Tables 21, 22.

^bRegions which have a propensity to visit Alberta of less than one tenth of one percent have not been considered.

person-trips to Alberta from each sub-market.

V. ACTUAL TOURIST FLOWS

Kates, Peat, Marwick and Company measured the flow of out-of-province visitors to Alberta through a statistically determined random sample during the summer of 1966.²⁰ The 9,000 direct interviews were conducted at cordon points encompassing all major exit points from the Province via all modes of transportation, and represent 2% of the total visitors for the summer period. The period of the study, May 28th to September 5th inclusive, takes in the time of the heaviest tourist flow.

Kates, Peat, Marwick and Company reported the number of parties visiting the Province from each sub-market, but aggregated the data concerning the number of visitors into regions which, in most cases, consist of several sub-markets. Since the model developed in the previous chapter was expressed in terms of visitors not parties, Table 24 converts the number of parties from each sub-market in North America into the number of visitors through the use of the average number of persons per party for each region.

In order to compare these data with the estimates of

TABLE 24

NUMBER OF VISITORS, BY ORIGIN¹

Origin of Visitors	Parties (Summer)	Persons per Party	Visitors (Summer)
British Columbia	62,651	2.70	169,158
Vancouver area	36,330	2.70	98,090
Manitoba	23,356	3.01	100,401
New Brunswick	914	2.20	2,011
Newfoundland	299	2.20	658
Northwest Territories	883	2.54	2,243
Nova Scotia	2,231	2.20	4,908
Ontario	39,419	2.47	97,365
Prince Edward Island	109	2.20	240
Quebec	9,866	2.16	21,311
Saskatchewan	66,810	3.14	209,783
Yukon	453	2.54	1,150
Alabama	273	3.07	838
Alaska	2,151	3.49	7,507
Arizona	1,807	2.97	5,367
Arkansas	146	3.09	451
California	27,939	2.92	81,581
Colorado	3,202	3.05	9,766
Connecticut	871	2.88	2,508
Delaware	21	2.68	56
Florida	1,764	2.72	4,798
Georgia	657	2.72	1,787
Hawaii	220	3.49	768
Idaho	2,335	3.19	7,449
Illinois	6,622	2.95	19,535
Indiana	3,018	2.95	8,903
Iowa	2,743	3.15	8,640
Kansas	1,247	3.07	3,828
Kentucky	174	2.97	517
Louisiana	419	3.09	1,295
Maine	153	2.88	441
Maryland	544	2.90	1,578
Massachusetts	1,256	2.88	3,617
Michigan	5,859	2.95	17,284
Minnesota	6,885	3.29	22,654
Mississippi	387	3.07	1,188
Missouri	960	3.15	3,024

TABLE 24 (Continued)

Origin of Visitors	Parties (Summer)	Persons per Party	Visitors (Summer)
Montana	10,710	3.24	34,702
Nebraska	1,578	3.07	4,844
Nevada	654	2.97	1,942
New Hampshire	114	2.88	328
New Jersey	2,032	2.68	5,446
New Mexico	431	2.97	1,280
New York	5,743	2.68	15,391
North Carolina	173	2.90	502
North Dakota	1,300	3.68	4,784
Ohio	3,660	2.95	10,797
Oklahoma	776	3.09	2,398
Oregon	5,398	2.92	15,763
Pennsylvania	2,424	2.68	6,596
Rhode Island	97	2.88	279
South Carolina	87	2.72	237
South Dakota	1,191	3.68	4,383
Tennessee	389	2.97	1,155
Texas	2,922	3.21	9,380
Utah	3,111	3.05	9,489
Vermont	142	2.88	409
Virginia	1,090	2.90	3,161
Washington	15,246	2.92	44,517
Washington D.C.	530	2.90	1,537
West Virginia	153	2.90	444
Wisconsin	3,587	2.97	10,654
Wyoming	981	3.19	3,129

¹Calculated from: Kates, Peat, Marwick and Co.,
 "Survey of Non-resident Travel," Vol. II, Tables 1, 8, 16.

tourist flows computed in Chapter III however, two adjustments are required. Table 25 gives the figures for non-resident travel to Alberta adjusted to remove business trips and expanded to take in the complete year rather than just the summer months. The first adjustment utilized data contained in the Kates et. al. survey on the ratio of business trips to those for which pleasure is the primary purpose. The second adjustment employs a composite ratio for all of Canada and another for the United States expressing the proportion of the total yearly tourist flows which were accounted for by the summer months used in the Kates et. al. survey. The ratios are based on the proportion of registrations at the National Parks in the Province during the summer months as compared to the total year.

Having made these two adjustments, we arrive at the actual number of tourists who visited the Province of Alberta during the year 1966.

TABLE 25

ACTUAL VISITORS TO ALBERTA, 1966¹

Sub-market	Tourists ² (Summer)	Total ³ Tourists
British Columbia	149,705	253,001
Vancouver area	86,810	146,709
Manitoba	86,947	146,940
New Brunswick	1,808	3,056
Newfoundland	592	1,000
Northwest Territories	1,642	2,775
Nova Scotia	4,412	7,456
Ontario	80,131	135,421
Prince Edward Island	216	365
Quebec	16,686	28,199
Saskatchewan	186,078	314,472
Yukon	842	1,423
Alabama	749	869
Alaska	751	871
Arizona	5,029	5,834
Arkansas	437	507
California	76,360	88,578
Colorado	9,151	10,615
Connecticut	2,195	2,546
Delaware	54	63
Florida	4,529	5,254
Georgia	1,687	1,957
Hawaii	77	89
Idaho	6,980	8,097
Illinois	18,558	21,527
Indiana	9,313	10,803
Iowa	8,329	9,662
Kansas	3,690	4,280
Kentucky	509	590
Louisiana	1,255	1,456
Maine	386	448
Maryland	1,490	1,728
Massachusetts	3,162	3,668
Michigan	16,420	19,047
Minnesota	21,838	25,332
Mississippi	1,062	1,232
Missouri	2,915	3,381

TABLE 25 (Continued)

Sub-market	Tourists (Summer)	Total Tourists
Montana	32,550	37,758
Nebraska	4,670	5,417
Nevada	1,820	2,111
New Hampshire	287	333
New Jersey	5,217	6,052
New Mexico	1,199	1,391
New York	14,745	17,104
North Carolina	474	550
North Dakota	4,612	5,350
Ohio	10,257	11,898
Oklahoma	2,324	2,696
Oregon	14,817	17,188
Pennsylvania	6,319	7,330
Rhode Island	244	283
South Carolina	224	260
South Dakota	4,225	4,901
Tennessee	1,033	1,198
Texas	9,089	10,543
Utah	8,891	10,314
Vermont	358	415
Virginia	2,984	3,461
Washington	41,846	48,541
Washington D.C.	1,451	1,683
West Virginia	419	486
Wisconsin	10,121	11,740
Wyoming	2,932	3,401

¹Compiled from: Kates, Peat, Marwick and Co., "Survey of Non-resident Travel," Tables 1, 8, 16.

²A tourist is a visitor whose primary purpose is pleasure.

³The data was adjusted to include the entire year through the use of gate registrations at Alberta's National Parks in 1966.

VI. CONCLUSION

Table 26 shows the comparison between the potential and the actual number of tourist trips to Alberta during 1966. It is immediately apparent from Column 4, the ratio of actual trips to the potential, that Alberta is far more successful in attracting Canadian tourists than American. With the exception of Quebec and the Northern territories, all of the Canadian provinces exceeded their potentials while not one of the American sub-markets reached even one half of its potential.

This phenomenon can be attributed in part to the lack of knowledge which Americans have about Alberta and its tourist attractions. This may be overcome to some degree by a more extensive promotional program but it must be realized that citizens have a natural tendency to be more interested in, and learn more about, their own country. This may account for a significant part of the international border effect on travel which was discussed in Chapter III.

A second factor which may contribute to the dichotomy between the levels of tourist flows from Canada and

TABLE 26
COMPARISON OF POTENTIAL AND ACTUAL
TOURIST FLOWS TO ALBERTA

Sub-market	Potential Person-trips to Alberta (000)	Actual Person-trips to Alberta (000)	Ratio of Actual to Potential
British Columbia	213	253.0	1.19
Vancouver area	146	146.7	1.00
Manitoba	66	146.9	2.23
New Brunswick	2	3.1	1.55
Newfoundland	... ^a	1.0	...
Northwest Territories	8	2.8	.35
Nova Scotia	...	7.5	...
Ontario	90	135.4	1.50
Prince Edward Island	...	.4	...
Quebec	47	28.2	.60
Saskatchewan	214	314.5	1.47
Yukon	14	1.4	.10
Canada	800	1050.9	1.31
Alabama	44	.9	.02
Alaska	6	.9	.15
Arizona	29	5.8	.20
Arkansas	14	.5	.04
California	590	88.6	.15
Colorado	48	10.6	.22
Connecticut	11	2.5	.23
Delaware	4	.1	.03
Florida	21	5.3	.25
Georgia	58	2.0	.03
Hawaii	...	.1	...
Idaho	18	8.1	.45
Illinois	194	21.5	.11
Indiana	108	10.8	.10
Iowa	69	9.7	.13
Kansas	47	4.3	.10
Kentucky	64	.6	.01
Louisiana	16	1.5	.09
Maine	5	.4	.08
Maryland	29	1.7	.06
Massachusetts	19	3.7	.20
Michigan	142	19.0	.13

TABLE 26 (Continued)

Sub-market	Potential Person-trips to Alberta (000)	Actual Person-trips to Alberta (000)	Ratio of Actual to Potential
Minnesota	87	25.3	.29
Mississippi	34	1.2	.04
Missouri	82	3.4	.04
Montana	170	37.8	.22
Nebraska	38	5.4	.14
Nevada	11	2.1	.19
New Hampshire	2	.3	.15
New Jersey	51	6.1	.12
New Mexico	22	1.4	.06
New York	79	17.1	.22
North Carolina	46	.6	.01
North Dakota	20	5.4	.27
Ohio	166	11.9	.07
Oklahoma	30	2.7	.09
Oregon	176	17.2	.10
Pennsylvania	84	7.3	.09
Rhode Island	5	.3	.06
South Carolina	20	.3	.02
South Dakota	13	4.9	.38
Tennessee	25	1.2	.05
Texas	243	10.5	.04
Utah	31	10.3	.33
Vermont	3	.4	.13
Virginia	30	3.5	.12
Washington	127	48.5	.38
Washington D.C.	4	1.7	.43
West Virginia	35	.5	.01
Wisconsin	144	11.7	.07
Wyoming	10	3.4	.34
United States	3324	433.8	.13

^aRegions with less than one tenth of 1 percent of their citizens potentially visiting Alberta were not considered.

those from the United States, is related to Alberta's position in the geography of North America. Alberta has very little to its north which attracts tourists (except Alaska), and the drawing power of those attractions which do exist is restricted by natural obstacles, poor transportation, and limited tourist accommodations. Thus the number of tourists who pass through Alberta in a north-south direction is greatly limited. Since approximately half of the potential tourists who visit a region, do so on their way to a more distant destination, Alberta cannot reasonably expect to attract the same level of tourist traffic from those areas which lie to the south as it expects from the regions to the east or west. The Kates, Peat, Marwick study found that 35% of Canadian visitors to the Province were enroute to a further destination while only 19% of Americans fell into this category.²¹ Although Kates et. al. employed the term "enroute" in a slightly different sense than the term "passing through" has been used here, the findings nonetheless substantiate the contention that considerably fewer southern tourists pass through the Province.

Although the attraction from all parts of the United States market is weak, some states are significantly weaker than others. The ratios of actual tourist flows to potential (Table 26) vary from .01 to .50. Certain patterns emerge when the states which are stronger than average are

grouped together. Washington, Montana, the Dakotas, Idaho, Minnesota, New York, and Massachusetts are all close to the Canadian border, thereby giving their residents ease of access to the Canadian transcontinental highway system and increasing the passing through visits accordingly. It is also likely that the residents of these states have a greater knowledge of Canada and its tourist attractions than do other American citizens. Another block of states which exceeds the average ratio of actual to potential tourist flows includes Arizona, Colorado, Nevada, Wyoming, Idaho, and Utah. The relative strength of these states may be due to the fact that they all have close access to mountain areas and therefore may be more knowledgeable about the merits of the mountain parks which are Alberta's greatest strength as a tourist area.

The states which have a lower than average ratio are, almost without exception, located in the south-eastern portion of the United States. Florida is the only state in that region which is stronger than average.

These results have revealed the strengths and weaknesses in Alberta's ability to attract tourists to the Province. The analysis of these weaknesses is hampered, however, by the fact that we can only get a static glimpse of the problem due to the lack of data. The evaluation of

present promotional programs is impossible without a before and after approach to the analysis.

In assessing Alberta's success in attracting tourists from the North American market as a whole, we find that Alberta has fallen far short of its potential. Relating this finding to the null hypothesis mentioned in the Introduction, that Alberta has an average degree of attraction power, it would appear at first glance that the null hypothesis has been refuted and that the potential should be revised downward. However, the fact that Alberta has succeeded in reaching its potential in the Canadian market suggests that it has the ability to improve its drawing power from the United States to the same degree. Whether or not the Province could some day attract tourists equally successfully from both countries would depend on the cause of the present disparity. If the cause is related to the present low level of north-south "en route" visits, the equalization of the markets will have to await the further development of the North as a tourist attraction. If the cause of the disparity is a lack of knowledge regarding Canada on the part of American citizens, as is suggested by the location of those states which are relatively strong in achieving their potentials, promotional programs and other forms of publicity may gradually improve Alberta's tourist

flows from the United States.

Whatever the cause of the international border effect on tourist travel, it may be advantageous in future applications of the model (especially when using the model for predictive purposes) to adopt a dual potential. The potential flows from the United States would be revised downward while those applicable to the Canadian provinces would remain unchanged or be revised slightly upward. This would give recognition to the fact that, although ideally Alberta has the ability to draw tourists equally well from both countries; in fact, the potential given in the model is not currently attainable.

VII SUMMARY

The tourist industry is one of the largest and most rapidly growing industries in North America. In spite of its tremendous economic importance, however, great ignorance exists of many facets of the industry. Tourism, for example, lags far behind other large industries in the use of sophisticated techniques for the planning and evaluation of its operations. Government departments or private associations spend countless dollars on improving tourist flows, and yet they do not have the tools that are necessary to plan or evaluate these programs so that funds are allocated in the most effective manner.

The reasons behind this lack of progress by the tourist industry are many, but two of these warrant mention here. First, revenue from the tourist industry is widely dispersed throughout the tourist region and yet expenses of the type needed for the programs mentioned above are highly centralized. Therefore, although some tourist departments have a great deal of money to spend, there is not the same degree of comparison between expenses and corresponding

revenues. This leads to reduced pressure for effective planning and follow-up.

Second, because of the difficulty in accurately measuring tourist flows and expenditures, the collection of data is expensive and therefore studies are conducted too infrequently to be of assistance in either planning or evaluating promotion of facility expansion programs. In the face of these difficulties, those in authority have been forced to base their decisions on intuition or have copied the programs instituted by successful tourist regions.

In this study, we have proposed a method whereby governments and travel associations can take a more realistic approach to the problems of planning and evaluating their expenditures in attracting tourists.

The basis of the method is the concept of a standard. A standard is a bench mark against which performance can be compared thus pinpointing areas of strength and weakness. Once the weakness is revealed, further analysis can be undertaken to find the cause, and where necessary corrective action can be taken. Similarly, changes from year to year can be analyzed thus making it possible to trace the results of a promotional campaign or some other course of action.

The standard which was used in this study was the

potential market for tourism for the region, in this case Alberta. The potential market has the advantage of being a dynamic rather than a stable standard. As population levels and socio-economic conditions change, the potential market as defined in this model also changes.

In estimating the potential market for tourism, it was necessary to isolate those factors which affected travel patterns but which were not related to the characteristics of an individual tourist region. These factors were divided into two categories: those which affected the decision of whether or not to travel; and, those which affected the choice of destination. The number of persons in a region who decide to travel (the propensity to travel for pleasure) can be related to many socio-economic factors. Many of these variables, however, appear to have different effects in different parts of the continent. In choosing place of residence as the index of the propensity to travel for pleasure, we attempted to minimize the effect of this phenomenon.

Other than the characteristics of individual regions, the choice of destination decision is primarily dependent upon travel costs. Since travel costs are difficult to measure, the distance from the residence to the destination of the tourist was used as an approximation.

Using these two variables, a model was developed which can be briefly expressed as follows:

$$Y = \sum_{i=1}^n [(P_i) (PTP_i) (D_i) (S_i)]$$

where;

Y = the total potential tourist visits to the tourist region during a given period.

P_i = the population of the sub-market.

PTP_i = the propensity to travel for pleasure of the residents of the sub-market. This is based on the proportion of the population which resides in each of various place of residence categories.

D_i = the distance effect. The percentage of tourists in the sub-market who travel a distance great enough to enable them to reach or pass through the tourist region. Those who pass through are counted both coming and going since they have the potential to visit the region twice.

S_i = the size of the tourist region relative to the total area accessible to tourists at a distance equal to that between the tourist region and the sub-market.

and where i is the subscript indicating the individual sub-markets.

In examining this model in the light of previous works in the field, we find that the model diverges from other works in several respects. Population and distance have long been considered important variables and have been used in a manner similar to that employed here. In the past, income (either median income or income distribution) was used as the index for what we have termed the propensity to travel for pleasure. However, we have shown that on the strength of available data, place of residence is a more accurate index. The size factor is an innovation which enables the model to be adjusted for application to tourist regions of varying sizes, as well as taking into consideration the fact that the tourist region makes up varying proportions of the area accessible to the tourists from the different sub-markets.

In estimating the market potential for tourism for Alberta, none of the individual characteristics of the region, other than its size and proximity to sub-markets, were considered. This had the effect of calculating the average market potential which follows from our null hypothesis that Alberta has an average degree of attractiveness to tourists. In addition, because the market potential was being used as a standard, the relative level of the potential of each sub-market is more important than the absolute level.

In a case where it would be necessary to bring the market potential more closely in line with actual tourist flows, or in order to use the model for predictive purposes, an additional term could be added to the model which would take into consideration the tourist region's superior or inferior level of attractiveness to tourists. The model would then be expressed as follows:

$$Y' = \sum_{i=1}^n \left[(P_i) (PTP_i) (D_i) (S_i) \right] AP$$

where AP is the attraction potential index of the tourist region, expressed relative to an average level of attraction power. With refined use of the AP term, the model could be employed to predict tourist flows to a region or attendance at a major recreational event.

FOOTNOTES

¹For the purposes of this study, a tourist is defined as an individual who takes a trip for which the primary purpose is pleasure. A tourist who takes two trips in a given year will be counted as two tourists. In measuring the tourist travel to a region, only non-residents of the region are counted in order to eliminate intra-regional travel.

²Francis E. Hummel defines sales potential as "the share of a market potential an individual company expects to receive for a specific product or product line" in Market and Sales Potentials (New York: The Ronald Press Co., 1961), p. 8.

³Wayne Boyet, "Area Complex and National Park Recreation Demand Projection" (unpublished Ph.D. dissertation, University of North Carolina, 1964), pp. 3,4.

⁴Marion Clawson and Jack L. Knetsch, Economics of Outdoor Recreation (Baltimore: The John Hopkins Press, 1966).

⁵W.C. Gilman and Co., Inc., "HemisFair 1968," New York, 1965, pp. 3-8. (Mimeographed.)

⁶Economic Research Associates, "The Economic Feasibility of a Major Fair and Exposition in San Antonio During 1968," Los Angeles, 1963, pp. 19-29. (Mimeographed.)

⁷Boyet, "Area Complex and National Park Recreation Demand Projection."

⁸Clawson, Economics of Outdoor Recreation, p. 125.

⁹The states included in each of the regions are as follows:

Northeast: Connecticut, Delaware, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont.

North Central: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Wisconsin.

South: Alabama, Arkansas, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia.

West: Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

¹⁰This reflects the larger size of households in the South. There are 3.45 persons per household in the South as opposed to 3.21, 3.27, and 3.15 in the other regions.

¹¹Although the actual propensities are in terms of total travel, not only travel for pleasure, adjustments which can be made to eliminate business trips do not unduly alter the relationships between regions.

¹²The theoretical propensity to travel for pleasure is the level of the actual propensity for the total population of a region which would be expected given the propensities of the various sub-groups of the population. For example, if the propensities of the white races and the non-white races in North America were known, it would be possible to calculate a theoretical propensity for a region based on the proportions of the population of the region which fell into each of these categories.

¹³The procedure used in calculating the theoretical propensities is as follows: the number of person-trips per household or person-trips per person for each income category (as given in Table 10) is multiplied by the percentage of the population of the region which falls in the same income category (Item 1, Table 11 gives the percentage of the regional population in each category). These products (Item 2 for person-trips per household, and Item 3 for person-trips per person) are summed giving the total number of person-trips per household or per person for the region, individually weighted according to its income distribution.

¹⁴It is possible that some other variable may have proved to be a better index. Other variables which deserve examination but cannot be considered here due to the lack of data gathered on a national scale include at a minimum: length of paid vacation (used by Boyet, Recreation Demand Projection, p. 5.); density of community of residence (John B. Lansing, William Ladd, and Nancy Barth, The Travel Market 1961-1962 (Ann Arbor: University of Michigan, 1963), pp. 61-68.); and, levels and distribution of personal disposable income (Clawson, Economics of Outdoor Recreation, p. 105.).

¹⁵Clawson, Economics of Outdoor Recreation, p. 65.

¹⁶Rate of penetration is defined as the number of admissions to the exposition per capita.

¹⁷The propensity to travel (both business and pleasure) increased from 3.01 in 1955 to 3.73 in 1962, an increase of 25%; the number of persons taking at least one trip increased 8% during the same period. Lansing, The Changing Travel Market, p. 220.

¹⁸Miles travelled per capita increased at an average rate of 55% per decade from 1930 to 1960. Clawson, Economics of Outdoor Recreation, p. 122.

¹⁹In calculating the American part of the potential, data from the 1960 census were utilized.

²⁰Kates, Peat, Marwick and Co., "Survey and Analysis of Non-resident Travel," Alberta, 1967. (Mimeographed.)

²¹Ibid., Vol. II, Appendix F, Table 48.

SELECTED BIBLIOGRAPHY

Books

- Clawson, Marion, and Knetsch, Jack L. Economics of Outdoor Recreation. Baltimore: The John Hopkins Press, 1966.
- Horngren, Charles T. Accounting for Management Control: An Introduction. Englewood Cliffs: Prentice-Hall Inc., 1965, pp. 209-236.
- Hummel, Francis E. Market and Sales Potentials. New York: The Ronald Press Co., 1961.

Unpublished Reports

- Atkinson, G.W. "The Geographic Origin of Overnight Guests at the Oklahoma State Lodges." Unpublished Ph.D. dissertation, University of Oklahoma, 1968.
- Boyet, Wayne. "Area Complex and National Park Recreation Demand Projection." Unpublished Ph.D. dissertation, University of North Carolina, 1964.
- Economic Research Associates. "The Economic Feasibility of a Major Fair and Exposition in San Antonio During 1968." Los Angeles, 1963. (Mimeographed.)

Gilman, W. C. and Co., Inc. "HemisFair 1968." New York, 1965. (Mimeographed.)

Kates, Peat, Marwick & Co. "Survey and Analysis of Non-Resident Travel." Alberta, 1967. (Mimeographed.)

Published Reports

Katona, George; Lininger, Charles A.; and Kosobud, Richard F. 1962 Survey of Consumer Finances. Ann Arbor: University of Michigan, 1963.

_____; Lininger, Charles A.; and Mueller, Eva. 1963 Survey of Consumer Finances. Ann Arbor: University of Michigan, 1964.

Lansing, John B., and Lilienstein, Ernest. The Travel Market 1955. Ann Arbor: University of Michigan, 1956.

_____, and Lilienstein, Ernest. The Travel Market 1956. Ann Arbor: University of Michigan, 1957.

_____, and Lilienstein, Ernest. The Travel Market 1957. Ann Arbor: University of Michigan, 1958.

_____. The Travel Market 1958. Ann Arbor: University of Michigan, 1958.

_____; Mueller, Eva; and Lorimer, Thomas. The Travel Market 1959-1960. Ann Arbor: University of Michigan, 1961.

_____; Ladd, William; and Barth, Nancy. The Travel Market 1961-1962. Ann Arbor: University of Michigan, 1963.

_____, and Blood, Dwight M. The Changing Travel Market. Ann Arbor: University of Michigan, 1964.

U.S. Department of Commerce. Bureau of the Census. Census of Transportation, 1963. Vol. I, Passenger Transportation Survey.

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